Neotropical Migratory Bird Species Review
Somes Bar Integrated Fire Project
January 19th, 2018

Under the National Forest Management Act (NFMA), the Forest Service is directed to "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." (P.L. 94-588, Sec 6 (g) (3) (B)). The Somes Bar Integrated Fire Project was designed with mitigations and silvicultural treatments to maintain and enhance habitat for neotropical migratory songbirds. Implementation of the project is in accordance with the objectives within Executive Order 13186 of which outlines responsibilities of federal land management agencies to the Migratory Bird Treaty Act.

The Six Rivers National Forest is proposing to manage lands within the Somes Bar Integrated Fire Project Area that are administered on the Ukonom and Orleans Ranger Districts and located in the Klamath River Watershed. Proposed management is intended to implement direction contained within the Six Rivers and Klamath National Forest Land and Resource Management Plans (LRMPs).

The Somes Bar Integrated Fire Project is located within Humboldt and Siskiyou Counties. Table 1 lists the 106 migratory bird species known to occur within the county, as well as those known or thought to occur within the project area. Habitat suitability evaluations were made using the California Wildlife Habitat Relationships System, Version 7.0 software, developed by the California Department of Fish and Game. The list of species potentially occurring in the project area was developed using sighting records, breeding bird surveys, and published information (Hunter and Hazard 1998). The project area consists of forested habitats with limited riparian vegetation and is considered potential habitat for 66 migratory species. A subset of these species (flamulated owl, Vaux's swift, red-breasted sapsucker, Hammond's flycatcher, brown creeper, western tanager, black-headed grosbeak, and yellow breasted-chat) are also considered Management Indicator Species (MIS) and have been analyzed to a higher degree within *Management Indicator Species Review; Somes Bar Integrated Fire Project, December 21, 2017.*

Table 1. Neotropical migratory bird species and habitat associations of Humboldt County, CA and those known or thought to occur within the Somes Bar Integrated Fire Project Area

Common Name	Habitat Association	Known or thought to occur in Project		Common Name	Habitat Association	Known or thought to occur in Project
Turkey Vulture	O			Ruby-crowned Kinglet	R,F	C
Osprey	W			Blue-gray Gnatcatcher	R,O	
Northern Harrier	O			Western Bluebird	O	

Common Name	Habitat Association	Known or thought to occur in Project		Common Name	Habitat Association	Known or thought to occur in Project
Sharp-shinned Hawk	F,R	U		Mountain Bluebird	O	
Cooper’s Hawk	F,R,O	U		Townsend's Solitaire	F	U
Northern Goshawk	F,R,O	R		Swainson's Thrush	F	U
Red-shouldered Hawk	R			Hermit Thrush	F	C
Red-tailed Hawk	O,F,R	C		American Robin	F,O,R	C
American Kestrel	O,R,F	Fc		Northern Mockingbird	O	
Merlin	O,R,F	R		American Pipit	O	
Peregrine Falcon	W,O,F	R		Cedar Waxwing	F,O	U
Prairie Falcon	O			Solitary Vireo	F	
Killdeer	O,W			Warbling Vireo	R,F	
Band-tailed Pigeon	F,O	C		Orange-crowned Warbler	F	C
Mourning Dove	O,F	Fc		Nashville Warbler	F,O	C
Flamulated Owl	F	U		Yellow Warbler	F,R	U
Long-eared Owl	F	R		Yellow-rumped Warbler	F,O	C
Common Nighthawk	O,F	R		Black-throated Gray warbler	F,O	C
Common Poorwill	O,F	R		Townsend's Warbler	F	U
Black Swift	F	Ca		Hermit Warbler	F	C
Vaux's Swift	F	Fc		MacGillivray's Warbler	F,R,O	U
Anna's Hummingbird	R,F,O	Fc		Common Yellowthroat	W	
Calliope Hummingbird	O,F	R		Wilson's Warbler	F,R	C
Rufous Hummingbird	F,O	U		Yellow-breasted Chat	R	U
Allen's Hummingbird	F,O	U		Western Tanager	F	C
Belted Kingfisher	W			Black-headed Grosbeak	F,R	C
Lewis'	F,O	R		Lazuli Bunting	O	

Common Name	Habitat Association	Known or thought to occur in Project		Common Name	Habitat Association	Known or thought to occur in Project
Woodpecker						Fc
Yellow-bellied Sapsucker	F,O			Indigo Bunting	O	
Red-naped Sapsucker	O.F			Green-tailed Towhee	O	
Red-breasted Sapsucker	F	U		Rufous-sided Towhee	O	
Williamson's Sapsucker	F	Ca		Chipping Sparrow	F,O	U
Northern Flicker	F,R,O	C		Black-chinned Sparrow	O	
Olive-sided Flycatcher	F,O	Fc		Vesper Sparrow	O	
Western Wood-Pewee	F,R	Fc		Lark Sparrow	O	
Willow Flycatcher	R,O	R		Sage Sparrow	O	
Hammond's Flycatcher	F	U		Savannah Sparrow	O	
Dusky Flycatcher	O,F	R		Grasshopper Sparrow	O	
Gray Flycatcher	O	Ca		Fox Sparrow	O,R	
Pacific-Slope Flycatcher	R,F	C		Song Sparrow	O,F,R	Fc
Say's Phoebe	O			Lincoln's Sparrow	O,F	U
Ash-throated Flycatcher	R,O			White-throated Sparrow	O	
Western Kingbird	O			White-crowned Sparrow	O,F	Fc
Horned Lark	O			Dark-eyed Junco	O,F	C
Purple Martin	F,O	Ca		Red-winged Blackbird	W	
Tree Swallow	R,O,W			Western Meadowlark	O	
Violet-green swallow	R,F,O	Fc		Brewer's Blackbird	O	
N. Rough-winged Swallow	W			Brown-headed Cowbird	O,R,F	U
Cliff Swallow	O,R			Purple Finch	F,R	C
Barn Swallow	O,R,F	U		Cassin's Finch	F	U
Brown Creeper	F	C		Pine Siskin	F,R	Fc

Common Name	Habitat Association	Known or thought to occur in Project		Common Name	Habitat Association	Known or thought to occur in Project
Rock Wren	O			Lesser Goldfinch	O	
House Wren	O,F,R	R		Lawrence's Goldfinch	O	
Marsh Wren	R			American Goldfinch	O,R	
Golden-crowned Kinglet	F	C				

Habitat Codes: W- Wetland habitat, including streams, ponds, lakes, reservoirs, rivers, marshes, and associated wetland vegetation **F- Forested** habitat including conifer forest, hardwood forest, mixed conifer/hardwood, and oak woodlands **R-** Riparian forests including willows and alder along streams, rivers and around ponds **O- Open** country habitat including grasslands, meadows, burned areas, clearcuts, brushlands, and residential areas.

Occurrence Codes: C- Common, almost always encountered during an outing in proper season and habitat; **Fc-** Fairly common, often encountered in specific habitats or in some years; **U-** Uncommon, present but not certain to be encountered during an outing in proper season and habitat; **R-** Rare, present but in very low numbers, not likely to be encountered even in proper habitat; **Ca-** Casual, few records but reasonably expected to occur again; **Acc-**Accidental, of unexpected and unpredictable occurrence

The project will not adversely impact migratory species or their associated habitats. Potential impacts to migratory species would be minimized through the adherence of LRMP Standards and Guidelines for snags/down woody debris, riparian reserve buffers, limited ground disturbance, and maintenance of canopy closure. The majority of the project is designed to improve habitat conditions, while still maintaining current functional habitat. Specific mitigations include, canopy closure will be minimum 40-60%, ground disturbance will be limited to 15% or less of the unit, vegetation species diversity and composition will be maintained, fuels treatments will occur in designated riparian reserves, and retention of snags and downed logs would be retained at five snags per acre and maintain 5 to 20 pieces of course woody debris (CWD) per acre following KNF LRMP guidelines.

Removal of mistletoe may impact some neotropical species, which often use mistletoe brooms as nest or rest sites. However, the objective of the proposed treatment is not to eliminate dwarf mistletoe from the stand but to increase the probability of tree survival during periods of extended drought and protect the stand from insects and stand replacing fire. Mistletoe will remain in the treated stands (in lower quantities) and in adjacent stands.

Diverse natural communities are highly dependent upon the disturbance factors (such as fire regimes) that develop the structure and function of ecosystems. Communities can

undergo negative changes in species composition and richness without these disturbance regimes or from the changes that result from a history of active management (reviewed in Atwilla 1994). In the Pacific northwest, Kennedy and Spies (2005) cite declines of diversified early-seral forests and broadleaf (hardwood) components of conifer-dominated landscapes federal lands resulting from years of fire suppression and the focus of old-growth conservation. Under current management policies, similar trends have in the same area on federal and non-federal lands have been modeled for the future (Spies et al. 2007).

Negative impacts to songbird populations have been observed to occur as a response to large-scale vegetation changes (Drapeau et al. 2000). Specific to hardwood associated bird communities, Betts et al. (2010) also hypothesized that declines of songbirds in species in the Pacific Northwest were due to the combination of forest succession and increased intensified forestry. This study found positive associations of many songbird species with the amount of broadleaf and young broad leaf forests at broad spatial scales. A study on fuels reduction management practices in southwestern Oregon used 12 species of oak woodland and chaparral associates and found the two species relative abundances increase due to treatments to reduce risk of fire (Alexander et al. 2007).

Understanding the type and extent of disturbance and other ecological mechanisms in landscapes of interest are critical when considering management approaches (Ibid). The North American Bird Conservation Initiative (2011) has identified the restoration of fire regimes as one of the most important challenges for forest managers nationwide. That synopsis details some successes and challenges to restoration projects including successful prescribed fire treatments and silvicultural practices that promote hardwood regeneration. The *Somes Bar Project* proposes management that attempts to recreate conditions and reintroduces ecological processes conducive to migratory songbirds.

On December 12, 2008, an MOU was signed by the U.S. Department of Agriculture Forest Service (USFS) and the USFWS to promote the conservation of migratory birds. This MOU directs agencies to evaluate the effects of proposed actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors. Mechanical treatment of forested habitats do have the ability to mimic the effects of fire, but efficacy of these treatments may depend whether or not they replicate food availability or predation conditions that are created by natural fire. As fuels reduction activities are implemented in the Western Klamath region, these activities should be closely monitored with respect to their effect on bird abundance and demography. For the Six Rivers and Klamath National Forests, the migratory bird species of management concern include species listed under the ESA as Threatened or Endangered, species designated by the Regional Forester as Sensitive Species and species listed under Standard and Guidelines 8-21 through 8-34 of the KNF LRMP as MIS for project level assessment (MIS Report, available from SRNF). There have been no site-specific surveys for migratory birds within the project area.

Literature Cited

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